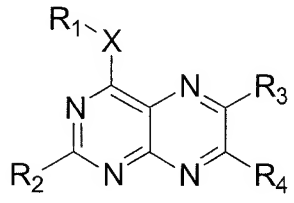
AMENDMENTS TO THE CLAIMS

Claims 1-7 (canceled)

8. (New) A method of prevention or treatment of a disorder in a mammal, the said disorder being selected from the group consisting of toxic effects of TNF-α, alcohol-induced hepatitis, and cachexia, comprising administering to said mammal an effective amount of a pteridine derivative having the structural formula (I):



wherein X represents an oxygen atom or a group with the formula $S(O)_m$ wherein m is an integer from 0 to 2, or a group with the formula NZ and wherein:

- R_1 is selected from the group consisting of methyl, ethyl, isopropyl and pentyl;
- Z is a group independently defined as R_1 or Z is hydrogen or the group NZ together with R_1 is either hydroxylamino or an optionally substituted heterocyclic group containing at least one nitrogen atom;
- R_2 is selected from the group consisting of amino; acylamino;
- R_4 is an atom or a group selected from the group consisting of hydrogen; halogen; C_{1-7} alkyl; C_{2-7} alkenyl; C_{2-7} alkynyl; halo C_{1-7} alkyl; carboxy C_{1-7} alkyl; acetoxy C_{1-7} alkyl; carboxyaryl; C_{1-7} alkoxy; C_{3-10} cycloalkoxy; aryloxy; arylalkyloxy; oxyheterocyclic; heterocyclic-substituted alkyloxy; thio C_{1-7} alkyl; thio C_{3-10} cycloalkyl; thioaryl; thioheterocyclic; arylalkylthio; heterocyclic-substituted alkylthio; amino; hydroxylamino; mercapto-amino; acylamino; thioacylamino; alkoxyamino; thioalkylamino; acetal; thioacetal; carboxylic acid; carboxylic acid esters, thioesters, halides, anhydrides, amides and thioamides; thiocarboxylic acid; thiocarboxylic acid esters, thioesters, halides, anhydrides, amides and thioamides; hydroxyl; sulfhydryl; nitro; cyano; carbamoyl; thiocarbamoyl, ureido; thio-ureido; alkylamino;

cycloalkylamino; alkenylamino; cycloalkenylamino; alkynyl-amino; arylamino; arylalkylamino; hydroxyalkylamino; mercapto-alkylamino; heterocyclic amino; heterocyclic-substituted alkylamino; oximino; alkyloximino; hydrazino; alkylhydrazino; phenylhydrazino; cysteinyl acid, esters, thioesters, halides, anhydrides, amides and thioamides thereof; aryl groups optionally substituted with one or more substituents selected from the group consisting of halogen, C_{1-7} alkyl, C_{1-7} alkoxy; optionally substituted heterocyclic radicals; aromatic or heterocyclic substituents substituted with an aliphatic spacer between the pteridine ring and the aromatic or heterocyclic substituent, whereby said aliphatic spacer is a branched or straight, saturated or unsaturated aliphatic chain of 1 to 4 carbon atoms; branched or straight, saturated or unsaturated aliphatic chains of 1 to 7 carbon atoms; and

- R_3 is an atom or a group defined as R_4, or R_3 together with R_4 forms a homocyclic or heterocyclic radical;

and/or being a pharmaceutically acceptable addition salt thereof and/or a stereoisomer thereof and/or a mono- or a di-*N*-oxide thereof and/or a solvate and/or a dihydro- or tetrahydropteridine derivative thereof.

9. (New) A method according to claim 8, wherein R_4 is hydrogen or methoxy.

10. (New) A method according to claim 8, wherein R_4 is hydrogen and wherein R_2 is amino.

11. (New) A method according to claim 8, wherein R_3 is 3-thienyl, 2-thienyl or a phenyl group with one or more substituents.

12. (New) A method according to claim 8, wherein R_2 is amino and wherein R_3 is 3-thienyl, 2-thienyl or a phenyl group with one or more substituents.

13. (New) A method according to claim 8, wherein R_3 is 3-thienyl, 2-thienyl or a phenyl group with one or more substituents, and wherein R_4 is hydrogen.

14. (New) A method according to claim 8, wherein R_2 is amino and wherein R_3 is 3-thienyl, 2-thienyl or a phenyl group with one or more substituents, and wherein R_4 is hydrogen.

15. (New) A method according to claim 8, wherein R_3 is a phenyl group with one or more substituents each independently selected from the group consisting of fluoro, methoxy, ethoxy, trifluoromethyl, dimethylamino, chloro, cyano, methyl, ethyl, carboxymethyl, methylthio, dimethylcarboxamido, diethylcarboxamido and methylcarboxylate.

16. (New) A method according to claim 8, wherein R_4 is hydrogen and wherein R_3 is a phenyl group with one or more substituents each independently selected from the group consisting of fluoro, methoxy, ethoxy, trifluoromethyl, dimethylamino, chloro, cyano, methyl, ethyl, carboxymethyl, methylthio, dimethylcarboxamido, diethylcarboxamido and methylcarboxylate.

17. (New) A method according to claim 8, wherein R_2 is amino, wherein R_4 is hydrogen and wherein R_3 is a phenyl group with one or more substituents each independently selected from the group consisting of fluoro, methoxy, ethoxy, trifluoromethyl, dimethylamino, chloro, cyano, methyl, ethyl, carboxymethyl, methylthio, dimethylcarboxamido, diethylcarboxamido and methylcarboxylate.

18. (New) A method according to claim 8, wherein R_3 is selected from the group consisting of 2-methoxyphenyl, 3-methoxyphenyl, 4-methoxyphenyl, 3,4-difluorophenyl, 4-dimethylaminophenyl, 4-trifluoromethylphenyl, 3,4-dichlorophenyl, 4-cyanophenyl, 4-ethoxyphenyl, 4-fluorophenyl, 4-ethylphenyl, 3-fluoro-4-methylphenyl, 3-methyl-4-methoxyphenyl, 3,4-dimethylphenyl, 3-chloro-4-trifluoromethylphenyl, 4-acetylphenyl, 3,4-dimethoxyphenyl, styryl, 4-tolyl, 4-chlorophenyl and 3,4,5-trimethoxyphenyl.

19. (New) A method according to claim 8, wherein R_2 is amino, and wherein R_3 is selected from the group consisting of 2-methoxyphenyl, 3-methoxyphenyl, 4-methoxyphenyl, 3,4-difluorophenyl, 4-dimethylaminophenyl, 4-trifluoro-methylphenyl, 3,4-dichlorophenyl, 4-cyanophenyl, 4-ethoxyphenyl, 4-fluorophenyl, 4-ethylphenyl, 3-fluoro-4-methylphenyl, 3-methyl-4-methoxyphenyl, 3,4-dimethylphenyl, 3-chloro-4-trifluoromethylphenyl, 4-acetylphenyl, 3,4-dimethoxyphenyl, styryl, 4-tolyl, 4-chlorophenyl and 3,4,5-trimethoxyphenyl.

20. (New) A method according to claim 8, wherein R_4 is hydrogen, and wherein R_3 is selected from the group consisting of 2-methoxyphenyl, 3-methoxyphenyl, 4-methoxyphenyl, 3,4-difluorophenyl, 4-dimethylaminophenyl, 4-trifluoro-methylphenyl, 3,4-dichlorophenyl, 4-cyanophenyl, 4-ethoxyphenyl, 4-fluorophenyl, 4-ethylphenyl, 3-fluoro-4-methylphenyl, 3-methyl-4-methoxyphenyl, 3,4-dimethylphenyl, 3-chloro-4-trifluoromethylphenyl, 4-acetylphenyl, 3,4-dimethoxyphenyl, styryl, 4-tolyl, 4-chlorophenyl and 3,4,5-trimethoxyphenyl.

21. (New) A method according to claim 8, wherein R_2 is amino, wherein R_4 is hydrogen, and wherein R_3 is selected from the group consisting of 2-methoxyphenyl, 3-methoxyphenyl, 4-methoxyphenyl, 3,4-difluorophenyl, 4-dimethylaminophenyl, 4-

trifluoromethylphenyl, 3,4-dichlorophenyl, 4-cyanophenyl, 4-ethoxyphenyl, 4-fluorophenyl, 4-ethylphenyl, 3-fluoro-4-methylphenyl, 3-methyl-4-methoxyphenyl, 3,4-dimethylphenyl, 3-chloro-4-trifluoromethylphenyl, 4-acetylphenyl, 3,4-dimethoxyphenyl, styryl, 4-tolyl, 4-chlorophenyl and 3,4,5-trimethoxyphenyl.

22. (New) A method according to claim 8, wherein:
    - X is NZ,
    - Z is selected from the group consisting of hydrogen, methyl, ethyl, n-propyl and benzyl; and
    - R_1 is selected from the group consisting of methyl, ethyl, n-propyl and benzyl.

23. (New) A method according to claim 8, wherein X is NZ and wherein the group NZ together with R_1 is selected from the group consisting of tetra-hydropyridinyl, hydroxylamino, morpholinyl, piperidinyl, piperazinyl, 1,2,4-triazolyl and N-methylpiperazinyl.

24. (New) A method according to claim 8, wherein R_2 is amino, wherein R_4 is hydrogen, wherein X is NZ and wherein the group NZ together with R_1 is selected from the group consisting of tetrahydropyridinyl, hydroxylamino, morpholinyl, piperidinyl, piperazinyl, 1,2,4-triazolyl and N-methyl-piperazinyl.

25. (New) A method according to claim 8, wherein the pteridine derivative is administered in combination with one or more pharmaceutically acceptable carriers or excipients.

26. (New) A method according to claim 8, wherein the pteridine derivative is in the form of a hydrate or a solvate with an organic solvent selected from the group consisting of alcohols, ketones and esters.

27. (New) A method according to claim 8, wherein the pteridine derivative is a compound selected from the group consisting of:

- 2-amino-4-ethoxypteridine
- 2-amino-4-ethoxy-6-chloro-pteridine
- 2-amino-4-ethoxy-6-(4-methoxyphenyl)-pteridine
- 2-amino-4-ethoxy-6-(2-methoxyphenyl)-pteridine
- 2-amino-4-ethoxy-6-(3-methoxyphenyl)-pteridine
- 2-amino-4-ethoxy-6-(3,4-difluorophenyl)-pteridine
- 2-amino-4-ethoxy-6-(4-dimethylaminophenyl)-pteridine
- 2-amino-4-ethoxy-6-(4-trifluoromethylphenyl)-pteridine
- 2-amino-4-ethoxy-6-(2-thienyl)-pteridine
- 2-amino-4-ethoxy-6-(3-thienyl)-pteridine
- 2-amino-4-ethoxy-6-(3,4-dichlorophenyl)-pteridine
- 2-amino-4-ethoxy-6-(4-cyanophenyl)-pteridine
- 2-amino-4-ethoxy-6-(4-ethoxyphenyl)-pteridine
- 2-amino-4-ethoxy-6-(4-fluorophenyl)-pteridine
- 2-amino-4-ethoxy-6-(4-ethylphenyl)-pteridine
- 2-amino-4-ethoxy-6-(4-acetylphenyl)-pteridine
- 2-amino-4-ethoxy-6-(3-fluoro-4-methylphenyl)-pteridine
- 2-amino-4-ethoxy-6-(4-methylthiophenyl)-pteridine
- 2-amino-4-ethoxy-6-(4-N,N-dimethylbenzamido)-pteridine
- 2-amino-4-isopropoxypteridine
- 2-amino-4-isopropoxy-6-chloropteridine

- 2-amino-4-isopropoxy-6-(3-methyl-4-methoxyphenyl)-pteridine
- 2-amino-4-isopropoxy-6-(3,4-dimethylphenyl)-pteridine
- 2-amino-4-isopropoxy-6-(3-chloro-4-trifluoromethylphenyl)-pteridine
- 2-amino-4-isopropoxy-6-(3-chlorol-4-fluorophenyl)-pteridine
- 2-amino-4-isopropoxy-6-(4-N,N-diethylbenzamido)-pteridine
- 2-amino-4-isopropoxy-6-(4-trifluoromethylphenyl)-pteridine
- 2-amino-4-isopropoxy-6-(3,4-difluorophenyl)-pteridine
- 2-amino-4-isopropoxy-6-(4-methoxyphenyl)-pteridine
- 2-amino-4-isopropoxy-6-(4-ethoxyphenyl)-pteridine
- 2-amino-4-isopropoxy-6-(4-N,N-dimethylbenzamido)-pteridine
- 2-amino-4-isopropoxy-6-(3-thienyl)-pteridine
- 2-amino-4-isopropoxy-6-(4-cyanophenyl)-pteridine
- 2-amino-4-isopropoxy-6-(4-benzoic acid methyl ester)-pteridine
- 2-amino-4-isopropoxy-6-(4-acetylphenyl)-pteridine
- 2-amino-4-isopropoxy-6-(3,4-dimethoxyphenyl)-pteridine
- 2-amino-4-ethylthio-6-(3,4-dimethoxyphenyl)-pteridine
- 2-amino-4-isopropylthio-6-(3,4-dimethoxyphenyl)-pteridine
- 2-amino-4-pentoxy-6-styrylpteridine,
- 2-amino-4-n-pentoxy-6-(1,2-dibromo-2-phenylethyl)-pteridine,
- 2-amino-4-methoxy-6-styryl-7-methoxypteridine,
- 2-amino-4-dimethylamino-6-phenylpteridine,
- 2-amino-4-dimethylamino-6-(4-tolyl)pteridine,
- 2-amino-4-dimethylamino-6-(4-methoxyphenyl)pteridine,
- 2-amino-4-diethylamino-6-phenylpteridine,
- 2-amino-4-diethylamino-6-(4-chlorophenyl)pteridine,
- 2-amino-4-diethylamino-6-(4-methoxyphenyl)pteridine,
- 2-amino-4-diethylamino-6-(3,4-dimethoxyphenyl)pteridine,

- 2-amino-4-dipropylamino-6-phenylpteridine,
- 2-amino-4-dipropylamino-6-(4-chlorophenyl)pteridine,
- 2-amino-4-dipropylamino-6-(4-methoxyphenyl)pteridine,
- 2-amino-4-dipropylamino-6-(3,4-dimethoxyphenyl)pteridine,
- 2-amino-4-morpholino-6-phenylpteridine,
- 2-amino-4-morpholino-6-(4-chlorophenyl)pteridine,
- 2-amino-4-morpholino-6-(4-methoxyphenyl)pteridine,
- 2-amino-4-morpholino-6-(3,4-dimethoxyphenyl)pteridine,
- 2-amino-4-piperidino-6-phenylpteridine,
- 2-amino-4-piperidino-6-(4-chlorophenyl) pteridine,
- 2-amino-4-piperidino-6-(4-methoxyphenyl)pteridine,
- 2-amino-4-piperidino-6-(3,4-dimethoxyphenyl)pteridine,
- 2-amino-4-N-methylpiperazino-6-phenylpteridine,
- 2-amino-4-N-methylpiperazino-6-(4-chlorophenyl)pteridine,
- 2-amino-4-N-methylpiperazino-6-(4-methcxyphenyl)pteridine,
- 2-amino-4-methylpiperazino-6-(3,4-dimetnoxyphenyl)pteridine,
- 2-amino-4-pyrrolidino-6-(4-methoxyphenyl)pteridine,
- 2-amino-4-piperazino-6-phenylpteridine,
- 2-amino-4-piperazino-6-(4-chlorophenyl)pteridine,
- 2-amino-4-piperazino-6-(4-methoxyphenyl)pteridine,
- 2-amino-4-piperazino-6-(3,4-dimethoxyphenyl)pteridine,
- 2-amino-4-morpholino-6-(3,4,5-trimethoxyphenyl)pteridine,
- 2-amino-4-morpholino-6-(3,4-formylidene-3,4-dihydroxyphenyl)pteridine,
- 2-amino-4-dimethylamino-6-(3,4-formylidene-3,4-dihydroxyphenyl) pteridine,
- 2-amino-4-pyrrolidino-6-(3,4,dimethoxyphenyl)pteridine,
- 2-amino-4-dimethylamino-6-(3,4-dimethoxyphenyl)pteridine,
- 2-amino-4-dimethylamino-6-methylpteridine,

- 2-amino-4-ethoxy-6-phenylpteridine,
- 2-amino-4-propylamino-6-phenylpteridine,
- 2-amino-4-propylamino-6-(3,4-dimethoxyphenyl)pteridine,
- 2-acetamido-4-isopropoxy-6-(3,4-dimethoxyphenyl)pteridine,
- 2-amino-4-ethoxy-6-(3,4-dimethoxyphenyl)pteridine,
- 2-amino-4-(1,2,3,6-tetrahydropyridinyl)-6-(3,4-dimethoxyphenyl)pteridine,
- 2-amino-4-ethoxy-pteridine,
- 2-amino-4-ethoxypteridine-N^8-oxide,
- 2-amino-4-isopropoxypteridine-N^8-oxide,
- 2-amino-6-chloro-4-ethoxypteridine,
- 2-amino-6-chloro-4-isopropoxypteridine,
- 2-amino-6-(p-methoxyphenyl)-4-ethoxy-pteridine;
- 2-amino-6-(o-methoxyphenyl)-4-ethoxy-pteridine;
- 2-amino-6-(m-methoxyphenyl)-4-ethoxy-pteridine;
- 2-amino-6-(3,4-difluorophenyl)-4-ethoxy-pteridine;
- 2-amino-6-(p-dimethylaminophenyl)-4-ethoxy-pteridine;
- 2-amino-6-(p-trifluoromethylphenyl)-4-ethoxy-pteridine;
- 2-amino-6-(2-thienyl)-4-ethoxy-pteridine;
- 2-amino-6-(3-thienyl)-4-ethoxy-pteridine;
- 2-amino-6-(3,4-dichlorophenyl)-4-ethoxy-pteridine;
- 2-amino-6-(p-cyanophenyl)-4-ethoxy-pteridine;
- 2-amino-6-(p-ethoxyphenyl)-4-ethoxy-pteridine;
- 2-amino-6-(p-fluorophenyl)-4-ethoxy-pteridine;
- 2-amino-6-(p-ethylphenyl)-4-ethoxy-pteridine;
- 2-amino-6-(p-acetylphenyl)-4-ethoxy-pteridine;
- 2-amino-6-(3-methyl-4-fluorophenyl)-4-ethoxy-pteridine;
- 2-amino-6-(p-thiomethylphenyl)-4-ethoxy-pteridine;

- 2-amino-6-(p-N,N-dimethylbenzamido)-4-ethoxy-pteridine;
- 2-amino-6-(3,4-dimethoxyphenyl)-4-ethoxy-pteridine,
- 2-amino-6-(3-methyl-4-methoxyphenyl)-4-isopropoxypteridine;
- 2-amino-6-(3,4-dimethylphenyl)-4-isopropoxypteridine;
- 2-amino-6-(3-chloro-4-trifluoromethylphenyl)-4-isopropoxypteridine;
- 2-amino-6-(3-chloro-4-fluorophenyl)-4-isopropoxypteridine;
- 2-amino-6-(p-N,N-diethylbenzamido)-4-isopropoxypteridine;
- 2-amino-6-(p-trifluoromethylphenyl)-4-isopropoxypteridine;
- 2-amino-6-(3,4-difluorophenyl)-4-isopropoxypteridine;
- 2-amino-6-(p-methoxyphenyl)-4-isopropoxypteridine;
- 2-amino-6-(p-ethoxyphenyl)-4-isopropoxypteridine;
- 2-amino-6-(p-dimethylbenzamido)-4-isopropoxypteridine;
- 2-amino-6-(3-thienyl)-4-isopropoxypteridine;
- 2-amino-6-(p-cyanophenyl)-4-isopropoxypteridine;
- 2-amino-6-(p-benzoic acid methyl ester)-4-isopropoxypteridine;
- 2-amino-6-(p-acetylphenyl)-4-isopropoxypteridine;
- 2-amino-6-(3,4-dimethoxyphenyl)-4-isopropoxypteridine,
- 2-amino-4-mercaptoethyl-6-(3,4-dimethoxyphenyl) pteridine;
- 2-amino-4-mercaptoisopropyl-6-(3,4-dimethoxyphenyl) pteridine,
- 2-acetylamino-4-(1,2,4-triazolyl)-6-(p-methoxyphenyl) pteridine,
- 2-acetylamino-4-(1,2,4-triazolyl)-7-(p-methoxyphenyl)pteridine,
- 2-amino-4-isopropoxy-7-(p-methoxyphenyl) pteridine,
- 2-amino-4-isopropoxy-7-(3,4-dimethoxyphenyl) pteridine,
- 2-amino-4-ethoxy-7-(3,4-dimethoxyphenyl) pteridine,
- 2-amino-4-methoxy-7-(3,4-dimethoxyphenyl) pteridine,
- 2-amino-4-(1,2,3,6-tetrahydropyridinyl)-6-(3,4-dimethoxyphenyl)pteridine,
- 2-amino-4-(diethanolamino)-6-[[3,4-(dimethoxyphenyl)]pteridine,

- 2-amino-4-thiomorpholino-6-[[3,4-(dimethoxyphenyl)]pteridine,
- 2-amino-4-morpholino-6-(4-acetanilide) pteridine,
- 2-amino-4-morpholino-6-(3-acetanilide) pteridine,
- 2-amino-4-morpholino-6-(4-aminophenyl) pteridine,
- 2-amino-4-morpholino-6-(3-aminophenyl) pteridine,
- 2-amino-4-morpholino-6-(4-benzoylaminophenyl) pteridine;
- 2-amino-4-morpholino-6-(4-phenoxyacetylaminophenyl) pteridine;
- 2-amino-4-morpholino-6-(4-propionylaminophenyl) pteridine;
- 2-amino-4-morpholino-6-(4-furoylaminophenyl) pteridine;
- 2-amino-4-morpholino-6-(4-cyclohexanoylaminophenyl) pteridine;
- 2-amino-4-morpholino-6-[4-(4-chlorobenzoyl)aminophenyl] pteridine;
- 2-amino-4-morpholino-6-(4-benzyloxyacetylaminophenyl) pteridine,
- 2-amino-4-morpholino-6-(4-isonicotinoylaminophenyl) pteridine;
- 2-amino-4-morpholino-6-(4-naphtoylaminophenyl) pteridine;
- 2-amino-4-morpholino-6-(4-methylsulfonylaminophenyl) pteridine;
- 2-amino-4-morpholino-6-(4-ethylsuccinylaminophenyl) pteridine;
- 2-amino-4-morpholino-6-[4-(4-methylbenzoate)aminophenyl) pteridine;
- 2-amino-4-morpholino-6-(3-benzoylaminophenyl) pteridine;
- 2-amino-4-morpholino-6-(3-benzensulfonylaminophenyl) pteridine;
- 2-amino-4-morpholino-6-(3-phenoxyacetylaminophenyl) pteridine;
- 2-amino-4-morpholino-6-(3-isonicotinoylaminophenyl) pteridine;
- 2-amino-4-morpholino-6-(3-cyclohexanoylaminophenyl) pteridine;
- 2-amino-4-morpholino-6-[3-(4-methylbenzoate)aminophenyl] pteridine;
- 2-amino-4-morpholino-6-(3-ethylsuccinylaminophenyl) pteridine;
- 2-amino-4-morpholino-6-(3-ethylmalonylaminophenyl) pteridine;
- 2-amino-4-morpholino-6-(3-benzyloxyacetylaminophenyl) pteridine;
- 2-amino-4-morpholino-6-(3-ethylsulfonylaminophenyl)pteridine,

- 2-amino-4-morpholino-6-[3-Boc-(L)-phenylalanine-aminophenyl] pteridine;
- 2-amino-4-morpholino-6-[3-Boc-(D)-phenylalanine-aminophenyl] pteridine;
- 2-amino-4-morpholino-6-[3-Boc-(L)-tryptophane-aminophenyl] pteridine;
- 2-amino-4-morpholino-6-[3-Boc-(D)-tryptophane-aminophenyl] pteridine,
- 2-amino-4-morpholino-6-(4-hydroxyphenyl) pteridine,
- 2-amino-4-morpholino-6-(4-ethoxyphenyl) pteridine;
- 2-amino-4-morpholino-6-(4-benzyloxyphenyl) pteridine;
- 2-amino-4-morpholino-6-(4-(phenethyloxy)-phenyl) pteridine;
- 2-amino-4-morpholino-6-(4-phenoxy-butyronitrile) pteridine;
- 2-amino-4-morpholino-6-(4-propoxy-phenyl) pteridine;
- 2-amino-4-morpholino-6-(4-phenoxy-butyric acid ethyl ester) pteridine;
- 2-amino-4-morpholino-6-(4-phenoxy-acetic acid ethyl ester) pteridine
- 2-amino-4-morpholino-6-(4-(2-methoxyethoxy)-phenyl) pteridine; and
- 2-amino-4-morpholino-6-(4-butoxy-phenyl)-pteridine.